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Strategic Mobility and the WMD Threat

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements for the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College, the Department of the Navy, or the Department of the Army.

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## **The Incident**

**3 July 2000:** Hours after receiving a deployment Notification Order, elements of the XVIII Airborne Corps conduct pre-deployment actions in support OPORD 1009. Due to an armor threat, a tank company from Fort Stewart is preparing equipment and personnel for Sea Port of Embarkation (SPOE) operations. The 82D Airborne Division's Ready Brigade is conducting pre-combat checks and rehearsals in preparation for an airborne insertion into an opposed airfield. Command and control (C2) and assault vehicles are moving to the departure airfield at Pope Air Force base. Follow-on forces are preparing equipment for rail load and overland transportation to the SPOE at Sunny Point, NC (approximately 100 miles away).

**Notification Hour + 16:** Less than two hours from wheels-up (liftoff), 75% of the assigned 305<sup>th</sup> Air Mobility Wing crews (McGuire AFB) complain of flu like symptoms and are hospitalized. The Corps Commander is forced to delay deployment until replacement crews are provided. Additionally, 50% of soldiers in the 82D Airborne Division's Personnel Holding Area (PHA) also complain of these symptoms. During technical inspections at the railhead, 50% of the yardmaster's staff becomes ill.

**Notification Hour + 19:** Corps G4 reports that 75% of the Wilmington area longshoremen are sick and that an additional 24 hours would be needed to complete SPOE operations for follow-on forces. During this Commander's update, the Corps' Emergency Operations Center (EOC) receives a phone call from a known extremist group called the "SWA Liberators" who claim responsibility for the act. The group's spokesman described how they had planted chemical and biological warfare devices in Fayetteville, Wilmington, and Ft. Stewart in an effort to keep "America's Contingency Corps" away from their homeland and to preclude another Desert Storm.

**Notification Hour+24:** The Secretary of Defense regretfully reports to the President that our failure to project forces to the SWA AOR, in a timely manner, has resulted in the loss of American lives and property in that region.

## Introduction

“With advanced technology and a smaller world of porous borders, the ability to unleash mass sickness, death and destruction today has reached a far greater order of magnitude. A lone madman or nest of fanatics with a bottle of chemicals, a batch of plague-inducing bacteria, or a crude nuclear bomb can kill tens of thousands of people in a single act of malevolence.

America’s military superiority cannot shield us completely from the threat. Indeed, a paradox of the new strategic environment is that American military superiority actually increases the threat of nuclear, biological, and chemical attack against us by creating incentives to challenge us asymmetrically. These weapons may be used as tools of terrorism against the American people.”<sup>1</sup>

The previously described “incident” is fictitious; however, it does depict possible effects and impacts of Weapons of Mass Destruction (WMD) use against deploying Continental United States (CONUS) based military forces. Force projection is the military component of power projection. It is a central element of U.S. strategy and a dominant pattern of US military operations. Force projection requires an ability to respond quickly and decisively to global requirements with military forces.<sup>2</sup>

Although no historical data is available to derive actual results of such an attack, one may argue that the same organizational and operational problems presented in this scenario could occur during an actual deployment. Much of the confusion, illnesses, and delays presented are possible at any CONUS military installation. Our CONUS bases are not prepared to deal with the effects of WMD. This is especially true of forces in the pre-deployment phase of a strategic deployment.

What conditions combined to create this strategic deployment dilemma? This paper is written to identify and analyze these contributing conditions and offer potential solutions.

## **Weapons of Mass Destruction: An Overview**

Commanders at all levels must reorient themselves with the three classes (nuclear, biological, and chemical) of Weapons of Mass Destruction and their effects. Nuclear weapons are probably the least likely form of WMD to be used without state sponsorship. Conversely, any terrorist with college-level knowledge of biology or chemistry, \$20,000 in supplies, and forged documents or accomplices to obtain "seed" bacteria or precursor chemicals could create a biological or chemical weapon.<sup>3</sup>

With the possible exception of the simplest "gun-type" fission device, considerable technology, infrastructure, and scientific knowledge are required to construct even a primitive nuclear weapon.<sup>4</sup> Furthermore, practical tests to determine the reliability of nuclear weapons cannot be conducted clandestinely. Consequently, devices that can disperse radioactive materials would not necessarily destroy property. Nuclear weapons are usually employed to kill people and contaminate terrain for an extended period of time.

Biological weapons, however, pose a serious terrorist employment threat. In 1966, an experiment proved that a terrorist could easily contaminate portions of the American populace. In this experiment, government personnel clandestinely released "harmless bacteria" into the New York subway system.<sup>5</sup> The contamination was distributed throughout major portions of the subway system by air turbulence created by the trains themselves. Thirty years later, Aum Shinrikyo duplicated this experiment in an actual chemical attack on Tokyo's subway. The technology for producing biological weapons is available now and terrorist groups are actively involved in the production of biological agents. In 1972, a US neo-Nazi group (the Order of the Rising Sun) produced 80 pounds of typhoid bacillus. In

1984, Paris police raided an apartment rented by the Baader Meinhof gang and found flasks of Clostridium Botulinum culture.<sup>6</sup>

Terrorists do not need to match the large-scale production capabilities of state-owned facilities; very small amounts of biological agents would be adequate for terrorist's purposes. As little as eight grams of Bacillus Anthracis spores (Anthrax), properly milled, mixed with dispersal compounds and optimally dispersed could inflict heavy casualties over a one square mile area.<sup>7</sup> Without rapid and effective medical intervention, inhalation of spores of Bacillus Anthracis is nearly always fatal.

A chemical agent is "a chemical substance that is intended for use in military operations to kill, seriously injure, or incapacitate people through its physiological effects."<sup>8</sup> Sarin is an extremely potent chemical agent. A fatal dose is at about .01 milligrams per kilogram of human weight. If a fatal dose is absorbed through the skin, death occurs within 15 minutes.<sup>9</sup> Although it can be absorbed through the skin, its primary source of entry is inhalation. Since air turnover systems in office buildings are deliberately controlled to reduce energy loss, they are inviting terrorist targets.

Each type of weapon of mass destruction described above can cause causalities that would overwhelm established emergency care capabilities of both military and civilian agencies. If contamination is present, things only get worst. Although only persistent chemical agents result in contamination by military standards, even minute residual amounts of non-vaporized nerve agent are outside acceptable bounds for civilians. Few biological agents cause contamination lasting more than a few days to a few weeks. Bacillus Anthracis, however, is a significant exception due to the bacteria's spore-forming characteristic. Contamination will have to be eliminated through chemical neutralization, physical removal,

or aging before military or civilian personnel can "safely" resume normal occupation of the area.

Unfortunately, contamination of non-combat areas (airfields, ports, and railheads) will have an immediate negative impact on strategic deployments. Civilians in these areas will immediately cease work to vacate the hazard area and the movement of military personnel and equipment will be delayed. Moreover, current military decontamination doctrine and equipment is not designed to achieve civilian levels of acceptance. Civilian decontamination assets will be needed to meet this safety level.

### **Terrorism: A National Focus**

A 1996 study completed by the National Defense Panel for the U.S. Department of Defense discovered historical data showing a strong correlation between U.S. involvement in international situations and terrorist attacks against the United States. Attacks by terrorist groups, they determined, could now be catastrophic for the American homeland. Terrorists can obtain the technology for weapons of mass terror and will have fewer second thoughts about using them to cause mass causalities.<sup>10</sup>

Following the sarin gas attack in Japan and the Oklahoma City bombing, President Clinton signed Presidential Directive Decision 39 (PDD 39) that directs government agencies to begin preparing for the prospect of terrorist use of WMD.<sup>11</sup> PDD 39 addresses the threat at home or abroad in two separate categories: crisis response and consequence management.

In 1996, Congress passed the Defense Against Weapons of Mass Destruction Act that required immediate action to improve response capabilities at the federal, state, and community levels.<sup>12</sup> In a May 1998 commencement address at the U.S. Naval Academy, President Clinton announced his approval of two additional Presidential Decision Directives

(PDDs). PDD-62 & 63 address counterterrorism and critical infrastructure protection respectively. These actions are the result of a series of related presidential and congressional initiatives that reflect changing national security policies and priorities.<sup>13</sup>

The first category of threat in PDD 39, Crisis response, refers to instances where the perpetrators of an assault have been discovered before an actual release or incident. This scenario occurs when a terrorist's plan is uncovered or neutralized and the device is rendered safe. The Federal Bureau of Investigations (FBI) is responsible for domestic crisis and the State Department's Office of Counterterrorism is responsible for overseas incidents.

If FBI crisis response measure fails, resulting in a WMD incident, FEMA is then responsible to conduct consequence management activities. Consequence management describes process to alleviate the short and long-term physical, socioeconomic, and psychological effects of a chemical or biological attacks. To conduct these actions, FEMA is required to coordinate with international, national, and regional agencies for the use of their mission unique assets in support of a multitude of missions. In addition to the coordination requirements for these assets, FEMA is responsible for preparatory work in response to such an attack. This preparatory work would include site surveys, assessment of the ability of local hospitals to treat or decontaminate victims, and determining the location of antidote stocks to support planning for surge capacity.<sup>14</sup>

To date, Presidential Decision Directives, Congressional initiatives, and studies have done much to provide direction, organization, and resources to identify and mitigate WMD threats on U.S. soil against civilians. However, these initiatives have failed to integrate the protection requirements of airfields, railroads, and seaports that support both military and

civilian mobility missions. Currently, no civil-military exercises are scheduled to determine these operational requirements or impacts.

### **Strategic Mobility: A Cold World Model**

During the Cold War, operational movement of forces from garrison to combat zones (pre-deployment and deployment) was a relatively simple. In Europe, operational commanders used organic or in-theater assets to plan, coordinate, and execute movement and maneuver of their main combat forces. Units typically used organizational transportation to self- and re-deploy from the combat zone. This organic capability minimized the need to divert strategic mobility assets away from stateside combat reinforcement deliveries. At the conclusion of conflict, combat units could simply re-deploy with the same organic assets that brought them to the fight.

The commonly used term, “train as we fight” was based on tough, realistic training that focused on both conventional and unconventional threats. Given the potential for unconventional weapons employment, Cold War forces conducted deployment exercises under tough, realistic conditions that integrated NBC survivability training at both the individual and collective levels. During all contingency phases, servicemen were expected to operate in both clean and contaminated battlefields environments. A serviceman assigned to the United States Army European Command Headquarters in the mid 1970’s stated, “When a chemical alarm sounded, you automatically reacted by donning your protective mask. We were prepared to fight and win in an NBC environment.”<sup>15</sup> Tough training and an ever-present threat combined to create an Outside Continental United States (OCONUS) military force that was well suited to operate in an NBC environment.

Leaders ensured NBC protective clothing and equipment were present and functioning properly. Multiple alerts and graded exercises had conditioned not only the individual servicemen; it had also honed the skills of the various staff levels. They understood how dispersion, work/rest rates, and warning and reporting systems mitigated the effects of WMD. The transitional lines between pre-deployment, deployment, employment, and redeployment were in many ways transparent. No safe havens existed.

Military organizations assigned to OCONUS bases during the Cold War also mitigated WMD threats with dispersion and collocation. By dispersing C2, combat, and support elements across overseas theaters, commanders ensured that WMD effects to the total force was minimized. Additionally, locating installations in proximity to local civilian population provided a level of protection from WMD attacks. Although terrorists were willing to target U.S. servicemen and civilians, they were less willing to risk collateral deaths of local nationals.

Cold War operational planners successfully integrated mitigating factors into all plans and orders because they had an excellent understanding of Soviet NBC employment and targeting doctrine. However, if successfully targeted, our well-trained troops were prepared to conduct combat operations in an NBC environment.

### **Strategic Mobility: A Post Cold War Model**

Since the fall of the Berlin Wall, the U.S. Defense budget has decreased more than 40% from its cold-war peak.<sup>16</sup> U.S. Forces forward deployed in Europe have transitioned from a largely defensive military role to that of engagement and partnership.<sup>17</sup> Our bloodless military successes in Europe, coupled with the findings of the 1995 Mobility Requirements Study Bottom-Up Review, determined that a Post Cold War Army could support two major

regional crises with expanded sealift, airlift, prepositioning and transportation infrastructure.<sup>18</sup> With this global response capability in mind, we quickly transitioned our military from a large, forward deployed force to a downsized, power-projected CONUS based military.

As a CONUS-based military force, a CINC is now required to deploy his OCONUS based units as a stabilizing force, while awaiting the arrival of main forces from CONUS. His ability to achieve operational objectives is directly tied to the U.S. Transportation Command's (USTRANSCOM) ability to support his strategic lift requirements.

In 1987, USTRANSCOM was established as the Department of Defense's single wartime manager for common user lift.<sup>19</sup> This functional CINC centrally manages peace and wartime mobility requirements through the assets provided by the Transportation Component Commanders (Air Mobility Command (AMC), Military Sealift Command (MSC), Military Traffic Management Command (MTMC)).<sup>20</sup> To mobilize OCONUS forces, TRANSCOM would require support from the commercial sector to support 88% of the overland, 50% of the air, and 68% of the sealift requirements. Additionally, U.S. Reserve forces would provide 56% of the MTMC, 46% of the AMC, and 88% of MSC requirements.<sup>21</sup>

Instead of main combat forces and equipment rolling out of forward deployed motor pools, across foreign highways, and into battle positions, they now must move overseas on TRANSCOM strategic mobility assets. Prior to movement into the theater of operations, military personnel and equipment are processed through a maze of scales, inspection stations, marshallalling grounds, SPOEs, APOEs, and equipment collection points.

Unlike Cold War period forces, CONUS based servicemen historically maintain a lower level of NBC force protection while stateside. Many servicemen incorrectly view the

United States as a safe haven removed from the threat of enemy attacks. Unfortunately, some military leaders have placed a greater priority on physical security rather than unit preparation to conduct Nuclear Biological and Chemical (NBC) defense operations. For many deploying CONUS forces, administrative requirements such as joint technical inspections of combat loads and reconfiguration of frustrated cargos at SPOEs and APOEs take priority over NBC protective measures. Although an NBC threat is present in the distant theater, stateside forces delay conducting NBC protective measures. As a result, unit and individual NBC Defense Equipment is present, but not in service (employed).<sup>22</sup>

This phased approach to WMD force protection allows deploying units to serve in an “administrative like” atmosphere that minimizes WMD force protection procedures and equipment. Although this lack of force protection allows deploying forces a greater amount of physical freedom and reduced physiological stress, it exposes them to a greater level of WMD risks. As identified in FM 3-100 NBC Operations, NBC weapons are very effective against troops that are unprepared or unprotected.<sup>23</sup> Our demonstrated lack of force protection in CONUS creates windows of opportunity for WMD terrorist’s attacks.

### **Geography and Strategic Mobility Vulnerabilities**

The concentration of U.S. forces along the East and West coasts has placed our strategic mobility capabilities at a greater risk to WMD threats. Currently, 95% of all CONUS Navy Bases and Air Stations, 90% of Marine Corps, 60% of Air Force’s Mobility Command, and 70% of Army combat units are concentrated located within 200 miles of East and West coasts.<sup>24</sup>

Of the 95% of Navy Bases and Air Stations in CONUS, 60% are located on the East Coast. Within that 60% of East Coast installations, 70% are located within two states (North

Carolina and Virginia). Within these two states, 75% of these units are 150 miles or less from one another. Additionally, 60% of the Air Force's Mobility Command assets are based primarily in California (20%), Delaware/Washington/New Jersey (20%), and North/South Carolina (20%).

The lack of distance between stateside military installations increases their vulnerability to WMD attacks and effects across multiple service organizations. For example, a WMD attack in Fayetteville, NC could possibly affect the C2, combat, supply and strategic capabilities of the XVIII Airborne Corps' Headquarters, the 82D Airborne Division and Pope Air Force base.

Given the federal charter of the Base Reduction and Realignment Commission (BRAC) to reduce the number of military installations, it is unrealistic to believe Congress will ever allow DoD to move units or create new bases. Therefore, greater WMD threat training and awareness is our best defense to protect our nation's CONUS military combat assets based within 200 miles of the East and West coasts.

### **Counterargument and Rebuttal**

Some may argue that our status as a superpower minimizes any real WMD terrorist threats against deploying CONUS troops. As a superpower, they would argue, we are technically and tactically superior to any adversary. We are, without doubt, a global superpower that is more tactically and technically proficient than any military force. However, it is our superpower status, global presence, and technical and tactical advantages that make us excellent terrorist targets. Terrorists could easily observe our stateside deployment habits over time and then use asymmetrical tactics to maximize causalities and gain legitimacy among peers. Given our porous U.S. borders, the public's access to

biological and chemical weapons information, and the increased terrorist activities worldwide, it is only a matter of time before our strategic mobility assets are targeted.

### **Conclusion**

Today U.S. forces are deployed globally and face unlimited threat possibilities. Our ability to project forces worldwide is central to our legitimacy as a military superpower. Unfortunately, our dependence on strategic mobility assets to project forces creates a critical operational vulnerability that terrorists could attack asymmetrically with WMD. Although vulnerable to WMD attack, the U.S. military will remain dependent on strategic mobility assets to project power worldwide. Therefore, protecting our deploying CONUS based forces from WMD threat is critical to achieving operational successes in future contingencies.

Clearly, the Cold War model of command awareness, training proficiency, and operational preparedness should serve as the foundation to mitigating future WMD terrorist attacks. We must eliminate servicemen's false assumptions that home stations or stateside installations are safe havens from WMD attacks. Deployment instructions, mobilization orders, and unit Standard Operating Procedures (SOPs) must be revised to emphasize the need to conduct anti-terrorist operations including anti-WMD protective measures throughout all phases of an operation.

In addition to integrating WMD force protection measures mentioned previously; we should also integrate WMD terrorist attacks into future civil-military exercises. These exercises will allow military and civilian leaders the opportunity to examine the problems created by WMD attacks and fashion robust cooperative interagency solutions.

Anti-American sentiment remains a strong motive for certain groups and organizations to contemplate the use of WMD against the United States and its allies. Retired Ambassador Morris Busby, former counterterrorism Coordinator for the U.S. government, warned that rogue states and sub-national groups may now be more inclined than previously to “punish” us with weapons of mass destruction simply for being who we are.<sup>25</sup> Some believe that the use of chemical, biological, or nuclear weapons on American soil is not a matter of “if” it will happen, but “when.” The use of WMD against deploying CONUS forces is also a matter of “when.” Our solutions to protect against this distinct possibility should start “now.” Our legitimacy as a power projection nation depends upon our ability to protect our forces and strategic mobility assets from WMD attacks during each phase of a given operation.

## Endnotes

<sup>1</sup> Department of Defense, Proliferation: Threat and Response, (Washington, D.C.: November 1997), 2.

<sup>2</sup> U.S. Army Transportation School, Commander's Guide To Strategic Deployment, (Fort Eustis, VA) 25.

<sup>3</sup> Charles Mercer, "1997 Terrorists, WMD, and the U.S. Army Reserves," Parameters, US Army War College, Autumn 1997, 100.

<sup>4</sup> Ibid.; 100.

<sup>5</sup> Robert Harris and Jeremy Paxman, A Higher Form of Killing (New York: Hill and Wang, 1982), 158.

<sup>6</sup> Edward M. Spiers, Chemical and Biological Weapons — A Study of Proliferation (New York: St. Martin's Press, 1994), 170. The FBI found cyanide held by the Revolutionary Action Movement (1967) and the Covenant Sword in the Arm of the Lord (1985).

<sup>7</sup> U.S. Congress, Senate, Committee on Governmental Affairs, Global Spread of Chemical and Biological Weapons, Hearings, 101<sup>st</sup> Cong., 1<sup>st</sup> sess. (Washington: GPO, 1989), 32.

<sup>8</sup> U.S. Department of the Army, Potential Military Chemical/Biological Agents and Compounds (Field Manual 3-9)(Washington, D.C.: 12 December 1990), 107.

<sup>9</sup> Andrew Bilski and Sudvendri Kakchi, "Tokyo Terror," Maclean's, 3 April 1995, 29. Sarin is fatal to humans at a ratio of one to 100 million parts by weight.

<sup>10</sup> Ivan Eland, "Protecting the Homeland: The Best Defense Is to Give No Offense," Cato Policy Analysis No. 306, 5 May 1998, 1.

<sup>11</sup> Hicks & Associates, Inc., Homeland Defense: Threat and Policies In Transition, 15 July 1998, pp.1- 3.

<sup>12</sup> Ibid, 3.

<sup>13</sup> Ibid, 2.

<sup>14</sup> Chris Sieple, "Consequence Management: Domestic Response to Weapons of Mass Destruction," Parameters, U.S. Army War College, Autumn 1997, 119.

<sup>15</sup> SGM G. Miller, Operations Sergeant Major, XVIII Airborne Corps Artillery, interviewed by author, 1 July 1996, Fort Bragg, N.C., notes.

<sup>16</sup> David S. C. Chu , Strategic Appraisal in 1997: Strategy and Planning for the 21<sup>st</sup> Century(RAND: 1997), 351.

<sup>17</sup> Vincent Demma, "USAREUR as NATO's Shield of Democracy," Army Link News, 23 April 1995, 1.

<sup>18</sup> U.S. Army Transportation School, Commander's Guide To Strategic Deployment, (Fort Eustis, VA), 27.

<sup>19</sup> U.S. Department of the Navy, Extract from USTRANSCOM HANDBOOK 24-2, (U.S. Naval War College, RI) 1 October 1998, 1- 6.

<sup>20</sup> Ibid, 1.

<sup>21</sup> U.S. Transportation Command, Briefing: Strategic Mobility Overview, (Scott AFB, IL 1999).

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<sup>22</sup> XVIII Airborne Corps, After Action Report: Sea Emergency Deployment Readiness Exercise(Fort Bragg, N.C.: 1998), 6.

<sup>23</sup> U.S. Department of the Army, Nuclear Biological Chemical Operations (Field Manual 3-100)(Washington, D.C.: 15 December 1990), 20.

<sup>24</sup> "Integrated Strategic Lift Program." Lkd. <http://public.scott.af.mil/hdarmc/about/orgchart.htm>.

<sup>25</sup> "Testimony of The Honorable Morris J. Busby," U.S. Senate, Permanent Subcommittee on Investigations, Committee on Governmental Affairs, 27 March 1996, accessed on the Internet on 18 December 1999 at <http://counterterrorism.com/busby.htm>.

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